

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 5, line 6, as follows:

Input filter 21 is connected to input terminal 20. In Exemplary embodiment 1, input filter 21 is formed of a circuit having only one set of tuning circuits where an inductance and a variable capacitance diode are connected in parallel. This circuit is hereinafter called a single tuning circuit. Tuned frequency of input filter 21 is varied by changing voltage applied to the variable capacitance diode. When the high frequency receiver receives a desired channel, voltage is applied to the variable capacitance diode so that the tuned frequency of input filter 21 substantially equals to the frequency of the desired channel. Signals other than the signal in the desired channel can thus be damped.

Please amend the paragraph beginning at page 8, line 18, as follows:

~~While, phase~~Phase shifter 28 is simply required to shift the phase only of intermediate frequency. Therefore, a polyphase type phase shifter having a high phase change accuracy of the frequency at a certain point is employed to shift the phase of the output signal of DBM 26 by 90°.

Please amend the paragraph beginning at page 9, line 12, as follows:

Occurrence of image interfering signal 49 is ~~then~~now described. Image interfering signal 49 occurs when an unnecessary signal exists in signals fed into the mixer. Here, for example, the unnecessary signal is a signal that is mixed with the signal of frequency-variable local oscillator 30 and converted into the same frequency as that of intermediate frequency signal 47 by the mixer. In other words, the mixer outputs a frequency difference between two inputted

frequencies, so that a signal having frequency image 50 higher than oscillation frequency 45 by frequency difference 48 is converted into the intermediate frequency. Here, frequency difference 48 is a difference between desired channel signal 42 and the signal of oscillator 30.

Please amend the paragraph beginning at page 9, line 22, as follows:

A signal that is converted by the mixer and generates image interfering signal 49 having the same frequency same as intermediate frequency 46 is called image 51, wherein frequency 52 of image 51 in embodiment 1 is 146.75 MHz.

Please amend the paragraph beginning at page 11, line 17, as follows:

However, realistically, it is difficult to keep the accuracy with which two phase shifters change the phase of the image interfering signal by just 180°. That is because the phase change disperses for frequencies of the phase shifters, or the phase change disperses every phase shifter, for example. In this case, a difference between the phases of the image interfering signals is not just 180°, so that the image interfering signals cannot be completely cancelled out by each other and cannot be entirely removed.

Please amend the paragraph beginning at page 13, line 3, as follows:

Image 72a is generated from the sum of two frequencies 80 (295.25 MHz) and 81 (301.25 MHz) lower than frequency 70a of the desired channel. The IRM inverts the phase of image 72a itself to cancel out image 72a itself. An image generated by a plurality of high frequency signals can be also be suppressed, so that the damping characteristics of the filter at frequencies 80, 81 can be moderated.

Please amend the paragraph beginning at page 16, line 13, as follows:

The damping amount of image 51 at frequency 52 is required simply to be secured at about 30 dB, so that input filter 21 may be formed of a double tuning circuit, for example, and high frequency amplifier 22 may be directly connected to unbalanced/balanced converter 24. Otherwise, unbalanced/balanced converter 24 may be interposed between high frequency amplifier 22 and input filter 21, high frequency amplifier 22 may be formed of a balanced circuit, and high frequency amplifier 22 may be directly connected to IRM 25. Signal loss can be reduced between high frequency amplifier 22 and IRM 25 in both configurations, so that degradation of the NF between them can be prevented. Therefore, even when a transistor having low NF is used in high frequency amplifier 22, the NF of the entire system can be kept maintained.

Please amend the paragraph beginning at page 17, line 18, as follows:

In the high frequency receiver of embodiment 1, a step-to-step filter is a fixed filter and interposed between the high frequency amplifier and the image rejection mixer. This configuration allows prevention of the image interference even when there are less tuning circuits. A tuning circuit is disposed only in the input filter, so that the Q value of the tuning circuit less changes with respect to the frequency and the shift of the matching of the impedance is reduced. Variation of gain and waveform of every channel is therefore reduced, so that stable receiving can be realized. This is important especially when a digital broadcast is received, and this configuration allows realization of an inexpensive digital receiving tuner.

Please amend the paragraph beginning at page 22, line 6, as follows:

~~While, the~~The lowest frequency of triple harmonic wave image occurring in the VHF channel is provided when the channel having the lowest frequency is received. Therefore, when second filter 24b is interposed so that a frequency not lower than the lowest frequency of the triple harmonic wave image is the cutoff frequency, the image interference characteristic can be improved.

Please amend the paragraph beginning at page 35, line 21, as follows:

When tuning circuits are used, Q values of the tuning circuits and a matching property between them vary with respect to the frequency. However, the number of tuning circuits can be decreased in the present invention, so that this variation can be reduced. Variation of the gain or waveform of every channel can be therefore reduced, and the reduction is useful especially when signals of a digital television broadcast are received.